



DOCKET NO.: 3442

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE MATTER OF THE PATENT

OF: Tomohiro KAWASE et al.

PATENT NO.: 6,007,622

ISSUE DATE: December 28, 1999

FOR: METHOD OF PREPARING GROUP III-V

COMPOUND SEMICONDUCTOR CRYSTAL

Assistant Commissioner for Patents

Washington, D. C. 20231 January 21, 2000

REQUEST FOR THE ISSUANCE OF A CERTIFICATE OF CORRECTION UNDER 35 USC 254 AND CERTIFICATE OF MAILING

Dear Sir:

A review of Letters Patent 6,007,622, issued on December 28, 1999 reveals that corrections should be made as shown on the enclosed Form PTOL-1050. Please see the Response dated April 13,21998, Pages 1 to 10, 13 and 15; as well as our Response dated August 30, 1999, Page 2 for an explanation of the requested changes.

Issuance of a Certificate of Correction as soon as possible will be much appreciated.

APPROVED

WGF:ar/3442 Enclosures /

> Form PTO-19 (10 pqs. 2x)

Respectfully submitted,

Tomohiro KAWASE et al. Applicant

Patent Attorney

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#### CERTIFICATE OF MAILING

I certify that this Correction Request with enclosures, is being mailed on: January 21, 2000, as first-class mail, with sufficient postage prepaid, in an envelope addressed to: ASSISTANT COMMISSIONER FOR PATENTS, Washington, D. C. 20231.

#### UNITED STATES PATENT AND TRADEMARK OFFICE **CERTIFICATE OF CORRECTION**

PATENT NO. : 6,007,622

DATED : Dec. 28, 1999

INVENTOR(S): Kawase et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```
Title Page, under [57] ABSTRACT:
         line 8, after "crucible" insert --within an airtight
                  vessel formed of a--;
Col.
               7, after "crystal" replace ". Particularly," by
      1, line
                  --, and particularly a carbon-doped--;
               8, cancel the entire line;
         line
               9, after "crystal" replace "in which" by --.--;
         line 10, cancel the entire line;
         line 12, after "prior" replace "arts as set forth in"
                  by --art--;
         line 13, replace the line to read: --methods for
                  preparing a carbon-doped group--;
         line 14, after "crystal" replace "in which carbon is"
                  by --, as set forth in the following
                  described publications. --;
         line 15, cancel the entire line;
         line 16, before "Japanese" delete "In";
         line 17, after "hereinafter)" replace "," by
                  --discloses--;
        line 19, after "method)", insert --.-;
        line 20, please cancel the entire line;
        delete the paragraph spacing between lines 20 and 21;
         line 21, delete the indentation;
        delete the paragraph spacing between lines 22 and 23;
        line 23, (actual line count) delete the indentation.
        line 34, (actual line count), after "in" insert --the
                 formation of--, after "like" replace "to be"
                  by --which is--;
        delete the paragraph spacing between lines 35 and 36
                  (actual line count);
        line 36, delete the indentation;
```

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ADDRESS OF SENDER:

FASSE PATENT ATTORNEYS, P.A. PATENT NO. 6,007,622 INDIAN POND LANE

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,007,622

DATED : December 28, 1999

INVENTOR(S): Kawase et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 1, line 40, before "Journal" replace "In" by --The--; line 42, after "hereinafter)" replace "," by --discloses--; line 44, after "method)" delete "is disclosed"; delete the paragraph spacing between lines 44 and 45 line 45, delete the indentation; delete the paragraph spacing between lines 46 and 47; line 47, delete the indentation, after "62" replace "having" by --which has--; after "doped" insert --therein--, line 48, after "advance," insert -- and which was--, after "method" insert --,--; line 55, (actual line counter), after "containing" insert --200ppm of--, after "water" delete "of 200ppm"; delete the paragraph between cols. 1 and 2; Col. 2, line 1, delete the indentation, before "U.S." delete "In"; line 2, after "hereinafter)" replace "," by --discloses--, after "preparing" insert --a--; line 3, after "method" insert --.--; line 4, cancel the entire line; delete the paragraph spacing between lines 4 and 5; line 5 , delete the indentation; after "preparing" insert --a--; delete the paragraph spacing between lines 14 and 15; line 21, (actual line count), delete the paragraph spacing between lines 21 and 22;

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ADDRESS OF SENDER:

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PATENT NO. 6,007,622

#### UNITED STATES PATENT AND TRADEMARK OFFICE **CERTIFICATE OF CORRECTION**

PATENT NO. : 6,007,622

DATED : December 28, 1999

INVENTOR(S): Kawase et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```
Col. 2,
         line 22, delete the indentation;
         line 28, after "preparing" insert -- the same.--;
         line 29, before "This", delete "thereof. --;
         line 30, after "contained", replace "having" by --in--;
         line 34, after "concentration" delete "of";
line 36, after "art" insert --methods--;
         line 42, after "since" insert --a--;
         line 45, after "oxygen," replace "that" by --which--;
         line 47, after "gas." replace "There was" by --As a
                   result, there is --.
         line 63, after "preparing" replace "in" by --, with--; line 64, after "ibility" insert --,--, after "a" insert
                    --carbon-doped--; after crystal, replace "of"
                   by --having--,
         line 65, after "characteristics" insert --and--;
         line 66, after "removed" insert --therefrom--, before
                    "in" delete "and";
Col. 3, line 1,
                   before "aspect" replace "According to an" by
                    --One--, after "invention" replace "," by
                    --provides--;
         line 2,
                   after "crystal", insert --.-;
         line 3, before "This", delete "is provided"; ---
line 4, after "doped" insert --therein--;
         line 9, after "compound" insert --raw--;
         line 11, after "compound" insert --raw--.
         line 20, after "the" insert --initial--;
line 21, after "doped" insert --into the material--;
         line 23, after "obtained" replace "in" by --with--;
         line 30, after "Preferably," insert --the--;
         delete the paragraph spacing between lines 30 and 31;
```

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,007,622

DATED : December 28, 1999

INVENTOR(S): Kawase et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```
Col. 3, line 31, delete the indentation;
        line 34, delete the paragraph spacing between lines 35
        and 36;
line 36, before "oxide", replace "Boron" by --The boron-
                  after "contains" delete "water of";
                  after "ppm" replace "." by --of water.--.
        line 38, after "filled" insert --into the crucible--; after "carbon" insert --to be--;
        line 39, delete the paragraph spacing between lines 39
                 and 40;
        line 42, after "Furthermore," insert -- an additional
               amount of carbon must be supplied to make up
               for the--, after "of" (first occurrence)
               delete "the";
        line 43, after "carbon" (first occurrence) replace "at
                 the" by --in--, after "compound", replace
                  "must" by --.-;
        line 44, before "Thus," delete "must be supplied. --;
        line 47, delete the paragraph spacing between lines 46
                  and 47;
        line 52, delete the paragraph spacing between lines 52
                 and 53;
        line 53, delete the indentation; after "process,"
                 replace "the" by --any--, after "in" insert
                 --the--;
        line 54, delete the paragraph spacing between lines 54
                 and 55;
        line 55, delete the indentation, after "applying"
                 replace "a" by --the--, after "treatment"
                 replace "on" by --to the--.
        line 63, before "change" insert --further--;
                         - page 4 of 10 -
```

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PATENT NO. 6,007,622

#### UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,007,622

DATED : December 28, 1999

INVENTOR(S): Kawase et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```
Col. 4,
         delete the paragraph spacing between lines 3 and 4;
          line 4, delete the indentation;
         line 12, after "those" insert --samples--. line 25, after "little" insert --further--;
         delete the paragraph spacing between lines 31 and
                   32;
          line 32, delete the indentation;
         line 38, (actual line count), after "like" insert
                   --,--, before "powder" delete "used", after
                  "powder" insert --being used--;
         delete the paragraph spacing between lines 41 and
         42 (actual line count);
         line 43, delete the indentation.
         line 46, (actual line count), after "oxide" insert
                   --which is--;
         line 47, (actual line count), after "state" replace
                   "where" by --in which--;
         delete the paragraph spacing between lines 49 and
         50 (actual line count);
         line 8, line 50, delete the indentation;
         delete the paragraph spacing between lines 58 and
         59 (actual line count);
         line 59, delete the indentation;
          delete the paragraph spacing between lines 61 and 62, (actual
          line count);
         line 62, delete the indentation; after "in" insert
                   --the--;
         line 63, (actual line count), after "oxide" replace
                   "that" by --which--, after "state" replace
                   "where" by --in which--;
         line 65, (actual line count), after "above" insert
                  --the--, after "oxide", replace "to" by
                 --and thereby--;
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#### UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,007,622

DATED : December 28, 1999

INVENTOR(S): Kawase et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 5, line 1, before "solid" insert --the--; delete the paragraph spacing between lines 2 and 3; line 3, delete the indentation; delete the paragraph spacing between lines 12 and 13; line 13, delete the indentation; delete the paragraph spacing between lines 17 and 18; line 18, delete the indentation; delete the paragraph spacing between lines 23 and 24; line 23, delete the indentation; after "constituent" replace "element" by --elements--; line 25, after "crucible" replace "to induce" by --and induces--. line 52, after "semiconductor", delete "crys-"; line 53, before "single", delete "tal"; line 56, after "semiconductor", delete "crys-"; line 57, before "single", delete "tal"; line 59, after "semiconductor", delete "crys-"; line 60, before "single", delete "tal"; line 61, before "DESCRIPTION" insert --DETAILED--; delete the paragraph spacing between Col. 5, line 67 and Col. 6, line 1; Col. 6, line 1, delete the indentation; after "powder 13" insert --which has been--; after "4" insert --forming a boron oxide line 2, line 3, layer 4b and a boron oxide film 4a as described below--; line 4, after "crystal" insert --7--; after "crucible 1," replace "arrangement was line 6, provided so" by --the materials were so arranged--.

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PATENT NO. 6,007,622

#### UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,007,622

DATED : December 28, 1999

INVENTOR(S): Kawase et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 6, line 31, after "heater "8" replace "using" by --in--; delete the paragraph spacing between lines 31 and 32; line 32, delete the indentation; delete the paragraph spacing between lines 34 and 35; line 35, delete the indentation. line 38, after "melt 2" delete ". The"; line 39, before "boron", replace "thickness of the" by --as a--, after "4b" delete "covering the upper"; line 40, before "approximately" replace "surface of GaAs melt 2 was" by --having a thickness of--; line 41, after "4b" replace "." by --, as shown also in Fig. 1.--; line 42, after "was" replace "kept" by --maintained--; delete the paragraph spacing between lines 43 and 44 (actual line count); line 44, (actual line count), delete the indentation; line 47, (actual line count), after "crystal" replace "is" by --are--; following Table 2, line 2, after "crystal" replace "corresponds" by --correspond--. delete the paragraph spacing between lines 65 and 66; line 66, delete the indentation; Col. 7, delete the paragraph spacing between lines 14 and 15; line 15, delete the indentation; line 17, after "oxide 4" insert --forming a boron oxide layer 4b and a boron oxide film 4a as described below--;

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# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,007,622

DATED : December 28, 1999

INVENTOR(S): Kawase et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 7, line 19, after "crucible 1," delete "arrangement" line 20, before "so", replace "was provided" by -- the materials were arranged--; delete the paragraph spacing between lines 24 and 25; line 25, delete the indentation; delete the paragraph spacing between lines 27 and 28; line 28, delete the indentation; line 44, after "heater 8" replace "using" by --in--; delete the paragraph spacing between lines 45 and 46; line 46, delete the indentation; delete the paragraph spacing between lines 49 and 50; line 50, delete the indentation; line 53, after "melt" replace ". This" by --2 as a--; line 54, replace the line to read: --oxide layer 4b--; line 55, before "approximately" replace "was" by --having a thickness of--; line 60, after "was" replace "kept" by --maintained--; delete the paragraph spacing between lines 61 and 62; line 62, delete the indentation; Col. 8, delete the paragraph spacing between lines 15 and 16; line 16, delete the indentation, after "experiment" replace "are" by --were--; delete the paragraph spacing between lines 18 and 19; line 19, delete the indentation; delete the paragraph spacing between lines 35 and 36; line 36, delete the indentation, after "conditions" replace "are" by --were--; delete the paragraph spacing between lines 37 and 38; line 38, delete the indentation. - page 8 of 10 -

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#### UNITED STATES PATENT AND TRADEMARK OFFICE **CERTIFICATE OF CORRECTION**

PATENT NO. : 6,007,622

DATED : December 28, 1999

INVENTOR(S): Kawase et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 8, delete the paragraph spacing between lines 60 and 61; line 61, delete the indentation; line 64, after "oxide 4" insert --that will form a boron oxide layer 4b and a boron oxide film 4a as described below--; line 66, before "so" replace "arrangement was provided" by --the materials were arranged--; Col. 9, delete the paragraph spacing between lines 6 and 7; line 7, delete the indentation, after "of" replace "example 4" by --example 5--. line 22, after "heater 8" replace "using" by --in a--; delete the paragraph spacing between lines 23 and 24;

line 24, delete the indentation; delete the paragraph spacing between lines 26 and 27; line 27, delete the indentation;

line 30, after "melt 2" replace ". The thickness of the" by --as a--;

line 31, replace the line to read: --oxide layer 4b--;

line 32, before "approximately" replace "was" by --having a thickness of--; line 36, after "was" replace "kept" by

--maintained--; delete the paragraph spacing between lines 37 and 38; line 38, delete the indentation.

Col.10, line 2, after "upon" replace "difference" by --differences--; line 47, before "material,", replace "Law" by --raw--;

- page 9 of 10 -

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Form PTO 1050 (REV.3-82)

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,007,622

DATED: December 28, 1999

INVENTOR(S): Kawase et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 11, line 42, after "powder", delete "solid";
Col. 12, line 3, after "fiber", delete "solid".

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ADDRESS OF SENDER: FASSE PATENT ATTORNEYS, P.A.

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Form PTO 1050 (REV.3-82)

PATENT NO.: 6,007,622